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Dated: September 22, 2006

Kevin L. Russell

Atty. Docket No. 7146.0122

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Baoxin Li et al. Group Art Unit: 2174

U.S. Pat. App. No.: 9/934,004 Examiner: TBD

Filed: August 20, 2001 Customer No.: 55648

Title: SUMMARIZATION OF BASEBALL VIDEO CONTENT

## INFORMATION DISCLOSURE STATEMENT IN ACCORDANCE WITH 37 CFR §1.98

Mail Stop Amendment Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

Applicants submit herewith four sheets of Form PTO-1449 (Modified) listing the patents and non-patent references of which Applicants are aware and which Applicants desire to have considered by the Patent Office in accordance with 37 CFR §1.97. In accordance with 37 CFR §1.97(c)(2), this Information Disclosure Statement is being submitted after the mailing date of a first Office Action on the merits of the above-identified application.

In accordance with 37 CFR §1.97(h), the filing of this Information Disclosure Statement will not be regarded as an admission that any patent or publication or combination of patents and

non-patent publications referred to herein is, or is considered to be, material to patentability under 37 CFR §1.56(b) unless specifically designated as such.

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This Information Disclosure Statement is being submitted with the requisite fee of \$180.00. The Commissioner is hereby authorized to charge any additional fees, or credit any overpayment, to Deposit Account No. 03-1550.

The person making this statement is the attorney who signs below on the basis of the information supplied by the inventor and the information in his file.

Respectfully submitted,

CHERNOFF, VILHAUER, McCLUNG & STENZEL

By:\_

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Dated: September 22, 2006

PTO/SB/08A (07-05)

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## **INFORMATION DISCLOSURE** STATEMENT BY APPLICANT

(Use as many sheets as necessary)

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Complete if Known				
Application Number	09/934,004			
Filing Date	August 20, 2001			
First Named Inventor	Li et al.	-		
Art Unit	2174			
Examiner Name	TBD			
Attorney Docket Number	7146.0122			

		1	U.S. PATENT	<del>7 ·</del>		
Examiner Initials *	Cite No.1	Document Number Publication Date MM-DD-YYYY		Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevan Passages or Relevant	
		Number - Kind Code <sup>2</sup> (if known) US-4.253,108	02-24-1981	Engel	Figures Appear	
	<del> </del>			Reneau		
	<del> </del>	US- 4,298,884	11-03-1981			
	<u> </u>	US- 4,321,635	03-23-1982	Tsuyuguchi		
_	<del> </del>	US- 4,520,404	5-28-1985	Von Kohorn		
_	-	US- 4,729,044	03-01-1988	Kiesel		
	ļ	US- 4,937,685	06-26-1990	Barker et al.		
	ļ	US- 5,027,400	06-25-1991	Baji et al.		
	<b></b>	US- 5,101,364	03-31-1992	Davenport et al.		
	ļ	US- 5,109,482	04-28-1992	Bohrman		
	ļ	US- 5,148,154	09-15-1992	MacKay, et al.		
		US- 5,200,825	04-06-1993	Perine		
	ļ	US- 5,333,091	07-26-1994	lggulden et al.		
		US- 5,339,393	08-16-1994	Duffy et al.		
_	ļ	US- 5,424,770	06-13-1995	Schmelzer, et al.		
		US- 5,434,678	12-31-1986	Abecassis		
		US- 5,452,016	09-19-1995	Ohara et al.		
		US- 5,521,841	05-28-1996	Arman et al.		
		US- 5,559,549	9-24-1996	Hendricks, et al.		
		US- 5,589,945	12-31-1996	Abecassis		
		US- 5,600,364	02-04-1997	Hendricks et al.		
		US- 5,600,573	02-04-1997	Hendricks et al.		
		US- 5,610,653	03-11-1997	Abecassis		
		US- 5,634,849	06-03-1997	Abecassis		
		US- 5,635,982	06-03-1997	Zhang et al.		
		US- D381,991	08-05-1997	Hendricks		
	_	US- 5,654,769	08-05-1997	Ohara et al.		
		US- 5,659,350	08-19-1997	Hendricks et al.		
		US- 5,664,046	09-02-1997	Abecassis		
		US- 5,675,752	10-7-1997	Scott et al.		
	-	US- 5,682,195	10-28-1997	Hendricks et al.		
		US- 5,684,918	11-04-1997	Abecassis		
		US- 5,696,869	12-09-1997	Abecassis		
		US- 5,710,884	01-20-1998	Dedrick		
	<del>                                     </del>	US- 5,717,814	02-10-1998	Abecassis		
	<b>-</b>	US- 5,724,472	03-03-1998	Abecassis		
		US- 5,734,853	03-31-1998	Hendricks et al.		
	1	US- 5,761,881	06-09-1998	Wall		
	<b></b>	US- 5,774,357	06-30-1998	Hoffberg et al.		
	<b>-</b>	US- 5,778,108	07-07-1998	Coleman, Jr.		
		US- 5,797,001	08-18-1998	Augenbraun, et al.		
	<b>-</b>	US- 5,798,785	08-25-1998	Hendricks		
		US- 5,861,881	01-19-1999	Freeman et al.		
		<del></del>		·		
		US- 5,867,386	02-01-1999	Hoffberg et al.		
		US- 5,875,107	02-23-1999	Hoffberg et al.		
	<u> </u>	US- 5,875,108	02-23-1999	Hoffberg et al.		
		US- 5,892,536	04-06-1999	Logan et al.		
		US- 5,900,867	05-04-1999	Schindler et al.		

US- 5,903,454 05-11-1999 Hoffberg et al. US-5,913,013 06-15-1999 Abecassis US-5,920,477 07-06-1999 Hoffberg et al. US-5,920,360 07-06-1999 Coleman, Jr. US-5,926,624 07-20-1999 Katz et al. US-5.933.811 08-1999 Angles et al. 09-28-1999 US-5,958,006 Eggleston et al. US-5,959,681 09-28-1999 Cho US-5,959,697 09-28-1999 Coleman, Jr. US-5,973,683 10-26-1999 Cragun et al. US- 5,986,690 11-16-1990 Hendricks US- 5,986,692 11-16-1999 Logan et al. US- 5,987,211 11-16-1999 Abecassis US-5,990,927 11-23-1999 Hendricks et al. US-5,990,980 11-23-1999 Golin US-6,002,833 12-14-1999 Abecassis US-6,011,895 01-04-2000 Abecassis US-6,038,367 03-14-2000 Abecassis US-6,052,554 04-18-2000 Hendricks et al. US-6,055,018 04-25-2000 Swan US-6,067,401 05-23-2000 Abecassis US-6,072,934 06-06-2000 Abecassis US-6,081,750 06-27-2000 Hoffberg et al. US- 6,088,455 07-11-2000 Logan et al. US-6,091,886 07-18-2000 Abecassis US-6,144,375 11-07-2000 Jain et al. US-6,151,444 11-21-2000 Abecassis US-6,160,989 12-12-2000 Hendricks, et al. Wolfe et al. US-6,161,142 12-12-2000 US-6,169,542 01-02-2001 Hooks et al. US-6,181,335 01-30-2001 Hendricks et al. US-6,195,497 02-27-2001 Nagasaka et al. US-6,201,536 03-13-2001 Hendricks, et al. US-6,208,805 03-27-2001 Abecassis 04-10-2001 US-6,215,526 Barton et al. US-6,216,129 04-10-2001 Eldering US-6,219,837 04-17-2001 Yeo et al. US-6,230,501 05-15-2001 Bailey, Sr., et al. US-6,233,389 05-15-2001 Barton et al. US-6,236,395 05-22-2001 Sezan et al. US- 6,252,544 6-26-2001 Hoffberg US-6,269,216 07-31-2001 Abecassis US-6,275,268 08-14-2001 Ellis et al. 09-11-2001 US-6,289,165 Abecassis 10-16-2001 US-6,304,715 Abecassis US-6,342,904 01-29-2002 Vasudevan et al. US-20020013943 01-31-2002 Haberman et al. US- 20020018594 02-14-2002 Xu et al. US-20020083473 06-2002 Agnihotri et al. US- 20020080162 06-27-2002 Pan et al. US-6,418,168 07-09-2002 Narita US-20020120929 08-2002 Schwalb et al. US-20020141619 10-03-2002 Standridge et al. US- 20020184220 12-05-2002 Teraguchi et al. US- 20020194589 12-2002 Cristofalo et al. US- 20030001880 01-2003 Holtz et al. US-20030026592 02-06-2003 Kawhara et al. US-20030081937 05-2003 Li US-6,549,643 04-15-2003 Toklu et al. US-6,597,859 07-2003 Leinhart et al. US-6,665,423 12-16-2003 Mehrotra et al. US-6,678,635 01-13-2004 Tovinkere et al. US-20040017389 01-2004 Pan et al. US- 20040088289 05-2004 Xu et al.

15 - 14	~ <sub>5</sub>				
4 Ju		US- 20040125877	07-2004	Chang et al.	
SEY O. P. JU		US- 6,774,917	08-10-2004	Foote et al.	
1 2 2 L		US- 20040227768	11-18-2004	Bates et al.	
TO TO TRADE		US- 6,829,781	12-07-2004	Bhagavath et al.	
· CETTIVE	_	US- 6,931,595	08-2005	Pan et al.	
		US- 6,981,129	12-27-2005	Boggs et al.	
-		US- 6,993,245	01-31-2006	Harville	
		US- RE36,801	08-01-2000	Logan et al.	
		US- D348,251	06-28-1994	Hendricks	
•		US- D354,059	01-03-1995	Hendricks	
		US- D368,263	03-26-1996	Hendricks	
		US- D402,310	12-28-1998	Hendricks	
		US- D435,561	12-26-2000	Pettigrew, et al.	

FOREIGN PATENT DOCUMENTS						
		Foreign Patent Document	Publication	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
	Cite No. <sup>1</sup>	Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> ( <i>if known</i> )	Date MM-DD- YYYY			Т <sup>6</sup>
		WO 99/65237	12-16-1999			
		JP 11-032267	02-02-1999			
		JP 11-261908	09-24-1999			
		JP 2000-013755	01-14-2000			
		I				

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials *	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	Т2
		Y. KAWAI, et al., "Detection of Replay Scenes in Broadcasted Sports Video by Focusing on Digital Video Effects," IEICE (D-II), Vol. J84-D-II, No. 2, pp. 432-435, February 2001 (in Japanese).	
		RICHARD O. DUDA and PETER E. HART, "Use of the Hough Transformation To Detect Lines and Curves in Pictures," Stanford Research Institute, Menlo Park, California, 1972, Association for computing Machinery, Inc., pp. 11-15.	
_		JOHN S. BORECZKY and LYNN D. WILCOX, "A Hidden Markov Model framework for video Segmentation Using Audio and Image Features," FX Palo Alto Laboratory, Palo Alto, CA 94304 USA, at least one year prior to filing.	
		PENG XU, SHIH FU CHANG, AJAY DIVAKARAN, ANTHONY VETRO and HUIFANG SUN, "Algorithms and System for High-Level Structure Analysis and Event Detection in soccer video," Columbia University, ADVENT – Technical Report #111, June 2001.	
		HAO PAN, BAOXIN LI, and M IBRAHIM SEZAN, "Automatic Detection of replay Segments in Broadcast Sports Programs By Detection of Logos in Scene Transitions," Sharp Laboratories of America Inc., 5750 NW Pacific Rim Blvd., Camas, WA, USA, 2002 IEEE, pp. IV-3385-IV-3388.	
		NOBORU BABAGUCHI, YOSHIHIKO KAWAI, YUKINOBU YASUGI, and TADAHIRO KITAHASHI, "Linking Live and Replay Scenes in Broadcasted Sports Video," ACM Multimadia workshop Marina Del Rey, CA, USA, Copyright ACM 2000.	
		LEXING XIE, "Segmentation and Event Detection in soccer Audio," EE 6820 Project Soccer Audio, May 15, 2001, pp. 1-9.	
		RICCARDO LEONARDI and PIERANGELO MIGLIORATI, "Semantic Indexing of Multimedia documents," April- June 2002, IEEE, pp. 44-51.	
		LEXING XIE, SHIH-FU CHANG, AJAY DIVAKARAN, and HUIFANG SUN, "Structure Analysis of Soccer Video with Hidden Markov Models," Department of electrical engineering, Columbia University, NY, NY and Mitsubishi Electric Research Lab, Murray Hill, NJ, at least one year prior to filing.	
		RICHARD W. CONNERS and CHARLES A HARLOW, "A theoretical comparison of Texture Algorithms," IEEE Transactions on Pattern Analysis and Machine Intelligence, vol. PAMI-2, No. 3, May 1980, pp. 204-222.	
		SUNGHOON CHOI, YONGDUEK SEO, HUNWOO KIM and KI-SANG HONG, "Where are the ball and players?: Soccer Game Analysis with Color-based Tracking and Image Mosaick," Dept. ofEE, Pohang University of Science and Technology, San 31 Hyoja dong, Pohang, 790-784, Republic of Korea, pp. 1-15.	
		ALAN E. BELL, "The dynamic digital disk," IEEE Spectrum, October 1999, pp. 28-35.	
		INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, ISO/IEC JTC1/SC29/WG11/N3399, CODING OF MOVING PICTURES AND ASSOCIATED AUDIO, "Visual Working Draft 3.0," June 2000, Geneva.	

<u> </u>	INTERNATIONAL ORGANISATION FOR STANDARDISATION ISSUED ITCA/SC200A/C44/N2202 CORNAC OF
	INTERNATIONAL ORGANISATION FOR STANDARDISATION, ISO/IEC JTC1/SC29/WG11/N3398, CODING OF MOVING PICTURES AND ASSOCIATED AUDIO INFORMATION, "MPEG-7 Visual Part of eXperimentation Model Version 6.0," June 2000, Geneva.
	INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, ISO/IEC JTC 1/SC 29/WG 11/N3410, CODING OF MOVING PICTURES AND AUDIO, "MPEG-7 Multimedia Description Schemes XM (Version 3.0), May 2000, Geneva.
	INTERNATIONAL ORGANIZATION FOR STANDARDIZATION ISO/IEC JTC 1/SC 29/WG 11/N3411, CODING OF MOVING PICTURES AND AUDIO, "MPEG-7 Multimedia Description Schemes WD (Version 3.0), May 2000, Geneva.
	INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, ISO/IEC JTC1/SC29/WG11/N3391, CODING OF MOVING PICTURES AND ASSOCIATED AUDIO, "DDL Working Draft 3.0," May 2000., Geneva.
	INTERNATIONAL ORGANISATION FOR STANDARDISATION, ISO/IEC JTC1/SC29/WG11/N2844, CODING OF MOVING PICTURES AND AUDIO INFORMATION, "MPEG-7 Description Schemes (V0.5)," July 1999, Vancouver.
	INTERNATIONAL ORGANISATION FOR STANDARDISATION, ISO/IEC JTC1/SC29/WG11/MXXXX, "MPEG-7 Media/Meta DSs upgrade (V02.), October 1999, Melbourne.
	ISO/IEC JTC 1/SC 29 N3705, "Information Technology – Multimedia Content Description Interface – Part 5: Multimedia Description Schemes," November 17, 2000
	INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, ISO/IEC JTC 1/SC 29/WG 11/N3966, "Information technology – Multimedia Content Description Interface – part 5: Multimedia Description Schemes, March 12, 2001.
	"XML Schema Part 1: Structures," W3C Working Draft, May 6, 1999, pp. 1-60.
	"XML Schema Part 2: Datatypes," World Wide Web Consortium Working Draft, May 6, 1999, pp. 1-37.
	"A Schema for TV-anytime: Segmentation Metadata AN195," NDS Contribution from MyTV, Copyright NDS Limited 2000, pp.1-27.
	"A Schema for TV-Anytime Segmentation Metadata AN195r1," myTV project, Copyright NDS Limited 2000, pp. 1-28.
	CHRISTEL, MICHAEL G., HAUPTMANN, ALEXANDER G., WARMACK, ADRIENNE S., AND CROSBY, SCOTT S., "Adjustable Filmstrips and Skims as Abstractions for a Digital video Library," Computer Science Department, Carnegie Mellon University, Pittsburgh, PA; pp. 1-7.
	MASUMITSE, KEN AND ECHIGO, TOMIO, "Video summarization Using Reinforcement Learning in Eigenspace; IBM Research, Tokyo Research Laboratory 1623-14, Shimotsuruma, Yamatoshi, Kanagawa, Japan.
	INSTILLE, STEPHEN S., "Tracking Using a Local closed-World Assumption: Tracking in the Football domain," MIT Media Arts and Sciences Master Thesis, August 5, 1994, pps. 1-62.
	KOBLA, DANIEL ET AL., "Identifying sports videos Using Replay, Text, and Camera Motion Features," Laboratory for Language and Media Processing at the University of Maryland, consisting of 12 pages.
	LEVINSON, S.E., et al., "An Introduction to the application of the Theory of Probabilistic Functions of a Markov Process to Automatic Speech Recognition," The Bell System Technical Journal, vol. 62, No.4, april 1993, pps. 1035-1074.
	SMYTH, PADHRAIC, "Belief Networks, Hidden Markov Models and Markovs random fields: A Unifying View, Pattern Recognition Letters, vol. 18, 1998 consisting of 11 pages.
	RABINER, LAWRENCE R., "A Tutorial on Hidden Markov Models and Selected Applications in speech Recognition," IEEE, vol. 77, No. 2, February 1989, pps. 257-286.

Examiner	Date	
Signature	Considered	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance

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Applicant's unique citation designation number (optional). Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.